

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Canceled)

2. (Currently amended) A method of driving a liquid crystal display device comprising:

supplying picture signals from a digital video data dividing circuit to a D/A converter circuit;

supplying a first voltage for a first gradation from the D/A converter circuit to a pixel by first scanning signals of a gate driver in a first subframe period;

supplying a voltage for a 0th gradation from the D/A converter circuit to the pixel by second scanning signals of the gate driver in a second subframe period after the first subframe period;

supplying a second voltage for a second gradation from the D/A converter circuit to [[a]] the pixel by third scanning signals of [[a]] the gate driver in a third subframe period after the second subframe period;

supplying a third voltage for a third gradation from the D/A converter circuit to [[a]] the pixel by fourth scanning signals of [[a]] the gate driver in a fourth subframe period after the third subframe period;

displaying a first combined gradation in a first frame period by displaying comprising [[a]] the first subframe period and [[a]] the second subframe period;

displaying a second combined gradation in a second frame period by displaying comprising [[a]] the third subframe period and [[a]] the fourth subframe period, and

~~wherein first frame period has the first subframe period and the second subframe period;~~

~~wherein second frame period has the third subframe period and the fourth subframe period;~~

wherein the first subframe period and the second subframe period are adjacent to each other;

wherein the third subframe period and the fourth subframe period are adjacent to each other;

wherein in the first frame period ~~is displayed~~ the first combined gradation acknowledged by operator's eye is displayed;

wherein the first combined gradation ~~is correspond~~ corresponds to half of the first voltage,

wherein in the second frame period ~~is displayed~~ the second combined gradation acknowledged by operator's eye is displayed,

wherein the second combined gradation ~~is correspond~~ corresponds to the second voltage and the third voltage, and

wherein the voltage for the 0th gradation is for displaying black-display in a screen of the liquid crystal display device,

wherein the second voltage is higher than the third voltage.

wherein the first voltage and the second voltage are same voltage, and

wherein the 0th gradation voltage is lower than the third voltage.

3. (Currently amended) A method of driving a liquid crystal display device comprising:

supplying picture signals from a digital video data dividing circuit to a D/A converter circuit;

supplying voltages of picture signals from the D/A converter circuit to a pixel by scanning signals of a gate driver in each of plural subframe periods; and

displaying one frame by displaying plural subframes;

wherein one frame period has the plural subframe periods;

wherein the plural subframe periods are adjacent to each other;

wherein a first voltage for a first gradation is supplied to the pixel in a first subframe period,

wherein 0th gradation voltage is supplied to the pixel in ~~[[the]]~~ a second subframe period after the first subframe period,

wherein a second voltage for a second gradation is supplied to the pixel in a third subframe period after the second subframe period,

wherein a third voltage for a third gradation is supplied to the pixel in a fourth subframe period after the third subframe period,

wherein the second voltage and the third voltage are different from each other throughout displaying the one frame, and

wherein the 0th gradation voltage is for displaying black-display in a screen of the liquid crystal display device,

wherein the second voltage is higher than the third voltage.

wherein the first voltage and the second voltage are same voltage, and
wherein the 0th gradation voltage is lower than the third voltage.

4. (Previously presented) The method of driving the liquid crystal display device according to any one of claims 2 and 3, wherein the one frame period is 1/60 second.

5. (Previously presented) The method of driving the liquid crystal display device according to any one of claims 2 and 3, wherein each of the subframe periods is 1/120 second.

6. (Previously presented) The method of driving the liquid crystal display device according to any one of claims 2 and 3, wherein the one frame period is 1/24 second.

7. (Previously presented) The method of driving the liquid crystal display device according any one of claims 2 and 3, wherein the one frame period is 1/48 second.

8. (Previously presented) The method of driving the liquid crystal display device according to any one of claims 2 and 3, wherein the one frame period is 1/96 second.

9. (Previously presented) The method of driving the liquid crystal display device according to any one of claims 2 and 3, wherein the liquid crystal display device is incorporated into an electronic equipment selected from the group consisting of a video

camera, a digital camera, a head mount display, a car navigation system, a projector, a car stereo, a personal computer, and portable data terminals.

10. (Currently amended) A liquid crystal display device comprising:

plural pixels;

a gate driving circuit;

a D/A converter circuit for supplying picture signals to the pixels by scanning signals of the gate driving circuit;

a digital video data dividing circuit for supplying picture signals to the D/A converter circuit;

a liquid crystal whose transmittivity is changed dependently on [[the]] a voltage of the picture signals supplied to the pixels;

means for supplying voltages of picture signals from the D/A converter circuit to a pixel by scanning signals of a gate driver in each of plural subframe periods; [[and]]

means for displaying one frame by displaying plural subframes; and

means for dividing the one frame to the plural subframes, and dividing picture signals supplied in each of frame periods to picture signals supplied in the plural subframe periods;

wherein one frame period has the plural subframe periods;

wherein the plural subframe periods are adjacent to each other;

wherein the supplied voltages in adjacent subframe periods are different from each other throughout displaying the one frame,

wherein a first voltage for a first gradation is supplied to the pixel in a first subframe period,

wherein 0th gradation voltage is supplied to the pixel in a second subframe period,

wherein a second voltage for a second gradation is supplied to the pixel in a third subframe period,

wherein a third voltage for a third gradation is supplied to the pixel in a fourth subframe period,

wherein the second voltage and the third voltage are different from each other throughout displaying the one frame, and

wherein the 0th gradation voltage is for displaying black-display in a screen of the liquid crystal display device,

wherein the second voltage is higher than the third voltage.

wherein the first voltage and the second voltage are same voltage, and

wherein the 0th gradation voltage is lower than the third voltage.

11. (Currently amended) A liquid crystal display device comprising:

plural pixels;

a gate driving circuit;

a D/A converter circuit for supplying picture signals to the pixels by scanning signals of the gate driving circuit;

a digital video data dividing circuit for supplying picture signals to the D/A converter circuit;

a liquid crystal whose transmittivity is changed dependently on the voltage of the picture signals supplied to the pixels;

means for dividing one frame to plural subframes, and dividing picture signals supplied in each of frame periods to picture signals supplied in plural subframe periods;

means for supplying a first voltage for a first gradation from the D/A converter circuit to a pixel by first scanning signals of a gate driver in a first subframe period;

means for supplying a voltage for a 0th gradation to the pixel by second scanning signals of the gate driver in a second subframe period after the first subframe period;

means for supplying a second voltage for a second gradation from the D/A converter circuit to ~~[[a]]~~ the pixel by third scanning signals of ~~[[a]]~~ the gate driver in a third subframe period after the second subframe period;

means for supplying a third voltage for a third gradation from the D/A converter circuit to ~~[[a]]~~ the pixel by fourth scanning signals of ~~[[a]]~~ the gate driver in a fourth subframe period after the third subframe period;

means for displaying a first combined gradation in a first frame period by displaying comprising ~~[[a]]~~ the first subframe period and ~~[[a]]~~ the second subframe period;

means for displaying a second combined gradation in a second frame period by displaying comprising ~~[[a]]~~ the third subframe period and ~~[[a]]~~ the fourth subframe period, and

~~wherein first frame period has the first subframe period and the second subframe period;~~

~~wherein second frame period has the third subframe period and the fourth subframe period;~~

wherein the first subframe period and the second subframe period are adjacent to each other;

wherein the third subframe period and the fourth subframe period are adjacent to each other;

wherein in the first frame period ~~is displayed~~ the first combined gradation acknowledged by operator's eye ~~is displayed~~;

wherein the first combined gradation ~~is correspond~~ corresponds to half of the first voltage,

wherein in the second frame period ~~is displayed~~ the second combined gradation acknowledged by operator's eye ~~is displayed~~,

wherein the second combined gradation ~~is correspond~~ corresponds to the second voltage and the third voltage, and

wherein the 0th gradation voltage is for displaying black-display in a screen of the liquid crystal display device,

wherein the second voltage is higher than the third voltage.

wherein the first voltage and the second voltage are same voltage, and

wherein the 0th gradation voltage is lower than the third voltage.

12. (Canceled)

13. (Previously presented) The liquid crystal display device according to any one of claims 10 and 11, wherein the one frame period is 1/60 second.

14. (Previously presented) The liquid crystal display device according to any one of claims 10 and 11, wherein each of the subframe periods is 1/120 second.

15. (Previously presented) The liquid crystal display device according to any one of claims 10 and 11, wherein the one frame period is 1/24 second.

16. (Previously presented) The liquid crystal display device according any one of claims 10 and 11, wherein the one frame period is 1/48 second.

17. (Previously presented) The liquid crystal display device according to any one of claims 10 and 11, wherein the one frame period is 1/96 second.

18 (Previously presented). The liquid crystal display device according to any one of claims 10 and 11, wherein the liquid crystal display device is incorporated into an electronic equipment selected from the group consisting of a video camera, a digital camera, a head mount display, a car navigation system, a projector, a car stereo, a personal computer, and portable data terminals.

19. (Previously presented) The method of driving the liquid crystal display device according to any one of claims 2 and 3, wherein the digital video data dividing circuit and the D/A converter circuit are formed on the same substrate.

20. (Currently amended) The liquid crystal display device according to any one of claims 10 and 11, wherein the digital video data dividing circuit, the D/A converter circuit, ~~the~~ gate driving circuit and plural pixels are formed on the same substrate.

21-24. (Canceled)

25. (Previously presented) The method of driving the liquid crystal display device according to any one of claims 2 and 3,
wherein the voltage for the 0th gradation is a reset signal.

26. (Previously presented) The method of driving the liquid crystal display device according to any one of claims 2 and 3,

wherein the liquid crystal display device displays a low-gradation voltage area, a middle-gradation voltage area, and a high-gradation voltage area in a screen, and

wherein a reset signal is supplied to the one of the subframes in the low-gradation voltage area of the picture screen, and no reset signal is supplied to the one of the subframes in areas other than the low-gradation voltage area of the picture screen.

27. (Previously presented) The liquid crystal display device according to claim 10,

wherein the liquid crystal display device displays a low-gradation voltage area, a middle-gradation voltage area, and a high-gradation voltage area in a screen, and

wherein a reset signal is supplied to the one of the subframes in the low-gradation voltage area of the picture screen, and no reset signal is supplied to the one of the subframes in areas other than the low-gradation voltage area of the picture screen.

28. (Previously presented) The liquid crystal display device according to claim 11,

wherein the liquid crystal display device has a low-gradation voltage area, a middle-gradation voltage area, and a high-gradation voltage area, and

wherein a reset signal is supplied to the one of the subframes in the low-gradation voltage area of the picture screen, and no reset signal is supplied to the one of the subframes in areas other than the low-gradation voltage area of the picture screen.